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1855

Callaway Mining and Manufacturing Com-
pany.

Charter &c.

Annual Report 1854

Missouri

CHARTER, &c.

9/24

OF THE

CALLAWAY

MINING AND MANUFACTURING

COMPANY.

OFFICE, No. 1 FORREST PLACE,
Back of 55 South Fourth St., Phila.

PHILADELPHIA:
WM. F. MURPHY, STATIONER AND PRINTER,
No. 116 CHESTNUT STREET.
1855.

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CALLAWAY
MINING AND MANUFACTURING
COMPANY.

CHARTERED BY THE STATE OF MISSOURI.

Capital 750,000 Dollars.

DIRECTORS.

ERSKINE HAZARD,
W. S. ROBARTS,
EPHRAIM CLARK,
F. N. BUCK,

BENJ. W. TINGLEY,
R. B. DAVIDSON,
GEORGE W. GORTON,
S. P. HANCOCK.

OFFICE, No. 1 FORREST PLACE,

Back of 55 South Fourth St., Phila.

PHILADELPHIA:

WM. F. MURPHY, STATIONER AND PRINTER,

No. 116 CHESTNUT STREET.

1855.

INTRODUCTION.

This Company owns, in fee simple, and free from all incumbrances, about three thousand acres of land in Callaway county, Missouri, which has been selected with special reference to its great mineral wealth, and embraces large masses or veins of Cannel and other coal, iron ore, of a rich quality, fire-clay, limestone, &c. The lands are situated on and near the Missouri River, about one hundred and twenty miles above St. Louis. The coal beds are from three and a half to five miles from the river, and the openings are one hundred and eighty feet above the level of the river, to which there is a gradual descent from the mines. The coal has been penetrated in one place near the outcrop, and found to be twenty-four feet in thickness; and in another place, three and a half miles distant, and found to be seventy-five feet in thickness, of solid Cannel coal, of the first quality.

It is supposed by geologists to underlie the whole surface, and to be the largest body of Cannel coal in the world. The tract also embraces about three hundred acres on the bank of the Missouri river, at Côte Sans Dessein, valuable for depots and landings, and probably for a large town, as it is the only high ground for twenty miles up or down the river, a rock foundation, entirely above high water mark, and consequently neither subject to overflow nor to be undermined by the current.

The route for a rail-road from the mines to the river has been surveyed, and the right of way obtained through the provisions of the charter; and the Company is now engaged in opening the mines, building the road, &c.

The advantages possessed by this Company must be apparent on the mere recital of their prominent features, and present inducements for the investment of capital rarely to be met with. Inexhaustible beds of Cannel coal, of the finest quality, lying contiguous to navigable waters of vast extent, traversed by hundreds of steamboats requiring coal for fuel, and furnishing cheap transportation to the numerous foundries, manufactories and gas-works at St. Louis and other western cities, for all of which purposes the coal is admirably adapted, (to say nothing of the demand for parlor and domestic use, for which it is highly approved,) together with the richest iron ore and other minerals necessary for the profitable manufacture of iron, constitute the sources from which, with judicious management, under a liberal charter, rich returns are confidently expected.

For more full particulars reference is made to the charter and accompanying documents.

CHARTER.

AN ACT TO INCORPORATE THE CALLAWAY MINING AND MANUFACTURING COMPANY, VIZ:

*Be it enacted by the General Assembly of the State of Missouri,
as follows:*

SEC. 1. That Edward Snyder, Daniel McCook, Isaac S. Clark, and C. A. Snyder and others, their associates and successors, are hereby constituted a body corporate and politic, and shall have perpetual succession by the corporate name of the Callaway Mining and Manufacturing Company, and by that name shall have perpetual succession, and have power to contract and be contracted with, sue and be sued, plead and be impleaded, in all courts and places; have a common seal, and alter the same at pleasure; and shall have power to make by-laws, not inconsistent with the laws of this state or of the United States.

SEC. 2. That said Company hereby incorporated, may appoint any one or more of its members, or other person or persons, to manage, control and direct the business and operations of said Company, according to the by-laws, rules and regulations of said Company.

SEC. 3. That said Company are hereby empowered to construct and build a rail-road or rail-roads from their coal banks and manufacturing establishments in said Callaway County, to the Missouri River, at or near *Côte Sans Dessein*; and the said Company are hereby empowered to acquire to themselves the right of way not exceeding fifty feet in width, through the whole route of said rail-roads, from the coal banks and manufacturing establishments aforesaid, to the Missouri River, at low water mark. And for the purpose of compensating the owner or owners of the land through which said rail-road shall pass, if the same cannot be otherwise agreed upon, the said Company may apply to the Sheriff of the County of Callaway, to cause the damages

which any owner of the land may sustain by reason of said road passing over the same, to be assessed by a jury; whereupon the said Sheriff shall cause a jury of six good and lawful men, who shall not be of kin to neither the owner of said land, nor any member of said Company, who being by said Sheriff duly sworn to inquire of the damages, shall, upon actual view of the land and premises, certify the amount of damages which such owner may sustain by reason of the running of the rail-road; which certificate shall be signed by a majority of said jury, and shall also state the width and length of land applied for by said Company, and shall also contain a description of the same by metes and bounds, which finding and certificate of the jury shall be filed with, and recorded by the Recorder of Deeds of said Callaway County; and when the owner shall be paid the amount of damages, as assessed, shall vest the right of way in such described land in said Company; but said jury, in assessing such damages, shall take into consideration the amount which the owner of said land will be benefited, if any, by the erection of such manufacturing establishments, and by such rail-road, and deduct the same from the value of the land condemned for the right of way as aforesaid; Provided always, that the lands through which it may be necessary to construct said road, or other improvements, the title to which is vested in the government of the United States, feme covert, minors or insane persons, the said Company, their agent or attorney, shall give notice of their intention to proceed, under provisions of this section, to condemn the land for the uses aforesaid, in some newspaper printed and in general circulation in said Callaway County, for at least three consecutive weeks previous to the day assigned by the said Sheriff for the empanneling of the jury as aforesaid; and upon said Company, their agent or attorney, depositing in the Treasurer's office, with the Treasurer of said County of Callaway, the amount of the damages so to be assessed as aforesaid, for the use or the government of the United States, or other persons owning said land, or their guardians, (if they have any,) then the right of way, or title to the land sought so to be obtained shall vest in said Company, their heirs or assigns.

SEC. 4. The said Company are hereby empowered to make and erect as many depôts, and of such dimensions as shall be necessary for the convenient use of said rail-road, and may acquire as much land as may be necessary by purchase or by an inquest of a jury, in manner and form as prescribed in the preceding section for obtaining the right of way; and after such an inquest in relation to the right of way as aforesaid, or in relation to the land necessary for a depot, or the erec-

tion of other necessary buildings for the convenient carrying on or management of the business of said Company, as aforesaid, if the amount of the damages assessed shall be duly paid or tendered to the owner or owners, their agents or attorneys, their guardians, or deposited in the manner prescribed in the proviso to the foregoing section, no writ of injunction, or other mesne or civil process shall prevent said Company, or other persons acting under its authority, from making and using said rail-roads and depôts, and other improvements, as aforesaid.

SEC. 5. Said Company shall cause a book to be opened, subject at all times to the inspection of any member of said Company, which shall contain the names of all the members thereof, and the estimated shares of stock which each member may now or hereafter own; and said shares may be transferred on the books of said Company, in the manner prescribed in the by-laws of said Company; and each member shall share the losses of said Company, (if any,) in proportion to the amount of his capital stock, and share the profits in the same proportion; and the members of said Company shall be held individually liable for the indebtedness of said Company, in proportion to the amount of capital stock severally held and owned by them.

SEC. 6. Said Company shall have the exclusive power to acquire, own and employ steam power or animal power, locomotive cars and carriages, necessary for the transportation of passengers, coal, and every description of personal property on said road, for themselves and all other persons.

SEC. 7. The General Assembly hereby retains the power to repeal or amend this charter at any time.

SEC. 8. This act shall be considered a public act, and pleaded in all courts of law and equity, and to take effect from and after the passage thereof.

[L. s.]

Approved Feb. 16, 1847.

Office of the Secretary of State.

I, Falkland H. Martin, Secretary of State of the State of Missouri, do certify, that the foregoing act of the General Assembly of the State of Missouri, entitled an Act to incorporate the Callaway Mining and Manufacturing Company, approved February 16, 1847, is a true copy of the original roll now on file in this office. In testimony whereof, I have hereunto set my hand and affixed the seal of said office.

Done at the City of Jefferson, this twenty-second day of March, A. D. 1847.

FALKLAND H. MARTIN,
Secretary of State.

An Act to amend an Act entitled "An Act to Incorporate the Callaway Mining and Manufacturing Company." Approved Feb. 16th, 1847.

Be it enacted by the General Assembly of the State of Missouri, as follows:

SEC. 1. Said Company shall cause a book to be opened, subject at all times to the inspection of any member of said Company, which shall contain the names of all the members thereof, and the estimated shares of stock which each member may now or hereafter own; and said shares may be transferable on the books of said Company, in the manner prescribed in the by-laws of said Company; and each member shall share the losses of said Company, if any, in proportion to the amount of his capital stock, and share the profits in the same proportion.

SEC. 2. The fifth section of the act to which this is amendatory, is hereby repealed. This act to take effect and be in force from and after its passage.

Approved February 17th, 1851.

Missouri.

OFFICE OF SECRETARY OF STATE,
City of Jefferson.

I, Ephraim B. Ewing, Secretary of State, do certify, that the foregoing act of the General Assembly, entitled "An Act to amend an act entitled An Act to Incorporate the Callaway Mining and Manufacturing Company, approved February 16th, 1847," approved February 17th, 1851, is a true and perfect copy of the original roll on file in this office.

In testimony whereof, I have hereunto set my hand, and affixed the seal of said office, at the City of Jefferson, the 4th day of March, A. D. 1851.

EPHRAIM B. EWING,
Secretary of State.

REPORT OF THE CANNEL COAL BED.

IN THE STATE OF MISSOURI, CALLAWAY COUNTY.

BY THOMAS S. RIDGEWAY, JUN., MINING ENGINEER.

HAVING been employed to make out a report of the mineral wealth of townships 44 and 45 N., of the County of Callaway, in the State of Missouri, embracing more particularly the Cannel coal, iron ore and limestone of said townships, I now proceed to lay before you the result of my observations. In order to form a proper idea of the amount of Cannel coal in the within named townships, it is only necessary to ascertain the thickness of the beds, and the general direction and dip of each stratum, conforming with the inclination of the associated rocks.

I found the mammoth bed of Cannel coal to be twenty-four feet in thickness, five and a half miles from the Missouri river, upon one of its tributary streams, in a position suitable for mining a large quantity per day, and am satisfied that this bed underlies nearly the whole of your land.

The course of the outcrop must be traced from close observation, as not any direct line can be established, from the fact that the outcrop runs in a zigzag line, conforming to the slopes of the hills, in shape something like the outline of the flitter cake. The coal, at this opening, mines beautifully, and comes out in large blocks of a merchantable character. Its fracture is concoidal and clear; colour, brownish black, and does not soil the fingers when handled.

I visited the Mastodon bank of Cannel coal, and found a shaft sunk upon it to the depth of forty-six feet, a square opening sixteen by six feet. The outcrop of the coal exposed here is thirty-six feet in length one way, and eighty feet in another direction, to a small shaft sunk upon it, eighteen feet deep. The coal here is of the finest quality, and some of the top layers are of the richest quality, of what is known by the name of bituminous coal. One seam eight feet thick, and another five feet. The coal may be very readily mined here for one cent per bushel.

I visited six openings in two small beds, and five places where large specimens of iron ore are to be seen, of the very best quality, all upon your land. I am satisfied that if openings were made upon the beds of iron ore, that there would be large developments of this mineral of the richest silicious red oxide, suitable to manufacture the finest wire, or make the best of steel.

In the group of rocks, I have been able to ascertain that there are two distinct beds of coal. The lower bed, twenty-four feet thick and upwards, at the mammoth bank, the other near the top of the group, containing two feet of solid Cannel coal, and about six feet of superior bituminous coal. Between these two beds of coal are several beds of iron ore of the character of silicious red and brown oxide. One which we have opened is about one foot in thickness, coming out in detached nodules, and found in claret-coloured, yellow and variegated shales. The other bed of iron ore, its thickness not ascertained.

There are some deposits of argillaceous bog iron ore, which may be useful in mixing with the other ores. Some of the ore is embodied in red, yellow and variegated shales, easily mined. The associated rocks are gray, brown and white sandstones, suitable for building purposes and furnace stacks. There is also fire-clay in abundance. The hills are capped with a hard flint stone, containing many fossil shells, encrinites, &c. Near this flint, perhaps under it, appears to be a bed fossiliferous reddish brown oxide of iron. Under this is a heavy massive bed of limestone, fossiliferous, and seams of it are suitable for fluxing furnaces.

The juxtaposition of these valuable minerals will cause the townships forty-four and forty-five, of Callaway county, at some future day to be of great value, as regards the manufacture of iron and mining of coal.

The hill at Côte Sans Dessein, which is immediately alongside of the Missouri river, and a permanent place of landing, is composed of a beautiful buff-coloured sandstone, suitable for building purposes, and is identical with the bed of sandstone from which the architect of the capitol, at Jefferson city, selected the stone for the front of that building. This spot would do well for a small town, as there is not any other place of landing for twenty miles, up or down the river.

The soil of the country is good, extending to the tops of the hills. A large quantity of corn and tobacco is raised, and the woodland is well calculated for grazing. Timber, white oak, red oak, hickory, walnut, cherry, maple, &c.

I believe that the lowest bed of Cannel coal in the group is the

largest deposit in the world. The beds of Cannel coal upon the eastern continent are thin layers from eight inches to two and three feet in thickness, associated with other coal. But this deposit is twenty-four feet thick at the Mammoth bed, and forty-six feet at the Mastodon bed, of pure Cannel coal, and, according to the analysis of Professors Booth & Boye, analytical chemists, of Philadelphia, the coal must be of a superior quality.

The advantages of Callaway county for the manufacture of iron, are of the first consideration to capitalists, on account of the scarcity of iron-blast furnaces in the state of Missouri, the great advantage of transporting the article of iron upon the Western waters, the country to be supplied, and the high price of the metal in the city of St. Louis. The pig metal now used at St. Louis is manufactured at Hanging Rock, in the state of Ohio, or in the state of Tennessee, and costs at the rate of from \$4 to \$8 per ton freight, depending upon the stage of the water. There is but one iron furnace in blast in the state of Missouri.

Steamboats run from St. Louis to Côte Sans Dessein in a day and a half, and return in the short space of ten to twelve hours. I do not know of any point upon the western waters more suitable to manufacture iron. The products of the county are corn, hemp, oats, live-stock, and principally tobacco, a share of which is shipped from Côte Sans Dessein landing, being a better landing than any for twenty miles up or down the river.

All of which is respectfully submitted.

THOMAS S. RIDGEWAY, Jun., *Mining Engineer.*

Reading, Pa.

DEAR SIR:

I received yours of yesterday, and in reply to the inquiry respecting Mr. Ridgeway, it gives me pleasure to be able to state, that I consider him well qualified to make a geological survey of any coal measure or district anywhere. He possesses practical and scientific knowledge in this line of a high order, and I would not hesitate to employ him in a job like yours.

From the analysis of the sample by Booth & Boye, I consider the coal well adapted to the manufacture of iron, and would deem it more of the splint than the Cannel character, the former being the most valuable for this purpose—the latter too highly bituminous. The ashes ought to be white or fawn colour, or light, and not red.

Very respectfully, yours,

G. N. ECKERT.

CALLAWAY COUNTY CANNEL COAL.

Statement made June, 1847.

This Cannel coal is located in Callaway county, in the state of Missouri, from three and a half to five miles from a point called "*Côte Sans Dessein*," on the Missouri river. The lands, including the coal and iron beds, contain about fifteen hundred acres.

The nearest bed of coal to the landings has been shafted to the depth of forty-six feet, and has not reached through to the bottom. The coal crops out at several places, and at the bed known as "*The Mammoth*," stands exposed, uncovered to view like an immense rock.

This coal is of the purest quality, and may be applied to any purpose for which coal can be used;—using the language of professor Johnson: "It is in a remarkable manner adapted to the purposes of western steamboats," and bears transportation better than any other sample of bituminous coal that came under his notice. It is highly commended for foundry purposes, and the manufacture of iron, being nearly free from sulphur, an article very injurious to iron. It has been found a superior article for making gas; and for domestic purposes it is spoken of with admiration, and commended as incomparable for the culinary, the stove and grate.

From the explorations and report of Mr. Ridgeway, (who was sent to the lands for the special purpose,) it appears, that iron ore of a superior quality abounds in the immediate vicinity of the coal; limestone, sandstone, and fire-clay can be had within the short space of one mile, so that all the materials necessary for the smelting and manufacture of iron are so nearly found together, that if iron can be manufactured to advantage, it must be at this place; and at St. Louis there is an excellent market for the article at all times.

We have a right of way for a rail-road and landings at "*Côte Sans Dessein*," on the river, where a town must necessarily spring up, if the rail-road to the mines is made, and business done, mills and furnaces built, &c. At this point, people from the interior bring their tobacco and produce, and ship it for St. Louis; and being near the mouth of the Osage river, (see map,) which is navigable, and running through a fine country, rapidly filling up with an industrious population; and

the lands about the mouth of the Osage being low, and subject to overflow, will oblige business to a large amount to be transacted at our landings, provided the proper accommodations and inducements are there held out for that purpose.

The demand for this coal at St. Louis alone could not well be supplied by one company, when properly introduced, as steamboats may (and probably will) load enough there to take them to New Orleans, without stopping on the way to wood, which would be to them a great saving in time and expense, and avoid many accidents that happen to their boats by snags and explosions.

C. A. SNYDER,

*One of the Commissioners named
in the act of Incorporation.*

Dauphin County, ss.—Personally appeared before me, the subscriber, one of the Judges of the Court of Common Pleas of said County, Charles A. Snyder, Esquire, who being by me duly affirmed, according to law, doth depose and say, “that the facts set forth in the preceding paper are true, to the best of his knowledge and belief.” In testimony whereof, I have hereunto set my hand and seal, at Harrisburg, the 23d day of June, Anno Domini, 1847.

WM. DOCK, [L. s.]

Pennsylvania, Dauphin County, ss.—I, Wm. D. Boas, Prothonotary of the Court of Common Pleas of said County, do certify, [L. s.] that William Dock, Esq., whose name appears to the above affidavit, is one of the Judges of said Court, to all whose official acts due faith and credit is, and of right ought to be given, as well in courts of justice as elsewhere. In testimony whereof, I have hereunto set my hand and seal, at Harrisburg, this 23d day of June, Anno Domini, 1847.

WM. D. BOAS, *Proth’y.*

Statement made July, 1847.

City of New York, ss.—Personally, appeared before me, Joseph Strong, a commissioner of deeds, Isaac S. Clark, who being by me duly sworn, according to law, doth depose and say, “that he has care-

fully read over the within statement of Charles A. Snyder, Esq., relative to the Callaway county Cannel coal, and entirely concurs with him, believing every part of his statement to be correct and true. And he further states, that he has spent several years in the immediate vicinity of said coal beds; that he first discovered and opened them; that he assisted in sinking a shaft to the depth of forty-six feet into the bed known as the *Mastodon Vein*, without reaching through to the bottom; and also sunk a shaft to the depth of twenty-four and a half feet through the *Mammoth Vein*, both of pure Cannel coal.

The mammoth vein is about three and a half miles from the mastodon vein; and from the curve and dip of the two veins where they crop out, it is evident that they are connected, and that they form a basin, underlaying the whole intermediate surface. The inclination of the strata at the mammoth vein is in the direction of the mastodon vein, and, *vice versa*, the inclination at the mastodon vein is in the direction of the mammoth vein.

The strata lie corresponding to the dip, and not on the edge, varying in thickness from four to eleven feet, and the seams between them are distinctly visible on the sides of the shaft and drift, at the mastodon vein, at an inclination of thirty to forty degrees.

The distance of the mastodon vein from Côte Sans Dessein, on the Missouri river, is about three and a half miles, between which points a rail-road can be constructed at a moderate expense, the surface of the country being naturally adapted for that purpose, and requiring but a small expense to grade the track; and timber of various kinds, suitable for the same, abounds on both sides of the contemplated rail-road.

The landing is on a rock shore, elevated entirely above high water mark, and possesses advantages, in that respect, over any other point, for twenty miles up or down the river.

A steam saw-mill for sawing the timber for the rail-road, and other lumber for mining operations, could be placed about half way from the mines to the landing, where there is water sufficient for supplying the engine, at all seasons of the year, as well as the best of saw timber in abundance, and conveniently situated.

This property contains the largest bodies of Cannel coal within my knowledge, and much nearer to navigable waters than any other.

Iron ore, of a rich quality, (red oxide,) is also found in many places, and in large quantities, on these lands, lying in large masses on the surface, and indicating extensive beds of this valuable mineral. One

opening has been made near the mammoth coal bank, twelve feet into a vein, one foot in thickness, of the finest quality of iron ore. The other beds have not been explored.

Sandstone, limestone and fire-clay are also found contiguous to the iron ore, affording great advantages for the manufacture of iron.

ISAAC S. CLARK.

Sworn and subscribed, the }
16th July, A. D. 1847. }

JOSEPH STRONG, *Commissioner of Deeds.*

Analysis by the Franklin Institute, Philadelphia, Penn.

Moisture,	.	.	.	.	.	.	1.67 per cent.
Volatile matter,	.	.	.	.	.	.	41.83 "
Carbon,	.	.	.	.	.	.	51.16 "
Earthy Matter,	.	.	.	.	.	.	5.34 "
							<hr/>
							100.00

Analysis by Dr. Clinton.—Coal from the Mammoth Vein.

I have analyzed the sample of Cannel coal, and find it to contain the following:

Carbon,	.	.	.	.	.	50.78
Bitumen,	.	.	.	.	.	31.59
Ashes,	.	.	.	.	.	15.02
Water,	.	.	.	.	.	2.61
						<hr/>
						100.00

The specific gravity of the sample was 1.250.

The ashes are of a light gray colour, and consist principally of silica and alumina, tinged with oxide of iron.

I tried the sample for sulphur, but found it to contain only a very small trace.

JAMES R. CHILTON, M. D. &c.

Coal from the Mastodon Vein.

No. 83 CHAMBERS STREET.

DEAR SIR,—I have analyzed the sample of Cannel coal which you left with me, and find it to contain the following:

Volatile matter, } consisting of }	Bitumen, 30.00 } Water, &c., 4.06 }	. 34.06
Carbon in the coke,	. . . . .	50.81
Ashes, . . . . .	. . . . .	15.13
		<hr/> 100.00

The ultimate analysis of the coal yielded the following:

Carbon,	73.21
Hydrogen,	4.76
Oxygen and Nitrogen,	6.90
Incombustible ash,	15.13
	<hr/> 100.00

The specific gravity of the coal is 1.252.

It cokes very readily, and without materially changing its form.

I tested the sample for sulphur, by experimenting upon 1,000 grains, but could only detect a slight trace.

The ashes, which are light and rather bulky, consist principally of silica and alumina, with a small portion of oxide of iron.

Very respectfully, yours,

JAMES R. CHILTON.



Analysis of the Cannel coal by Professors Booth & Boye, Analytical Chemists, Philadelphia.

Bituminous and other Volatile matter, .	40.05
Carbon,	46.83
Ashes,	13.12
	<hr/> 100.00

It leaves a whitish ash, and cakes in burning to a porous coke, amounting to 59.95 per cent. of the coal.

JAMES C. BOOTH,
M. H. BOYE.

To the Board of Directors of the Callaway Mining and Manufacturing Company.

GENTLEMEN,—I have visited the Cannel Coal Mines and iron ore lands, in Callaway County, Missouri, purchased of Messrs. Clark & Snyder, and after a thorough and careful examination, I beg leave to submit the result of my observations.

Deeming it to be of primary importance to determine as accurately as possible the extent of the Cannel coal beds, I directed particular attention to that subject, with a view to satisfy myself of the identity of the various strata lying contiguous to the coal at the places where it crops out, and that the coal forms a basin underlying the surface between the two principal openings. After careful investigation, I am satisfied that such is the case, and that the coal exists in vast quantities, probably sufficient to supply the Mississippi Valley for centuries; and in this opinion I am sustained by the certificate of Mr. David Percey, an experienced master miner, whom I employed to shaft the beds at different points, and to examine the superincumbent rocks and minerals. I also carefully explored the surrounding country, and I believe the coal is only accessable on the above mentioned lands. As it undoubtedly extends beyond their limits, however, I have thought it expedient to secure some adjoining tracts.

The question next in importance is the practicability of mining the coal, and transporting it to market on terms that will afford ample remuneration for the use of the capital invested, after paying the expenses of conducting the business. The information which I have collected under this head, at Frostburg, Pittsburg, St. Louis, and at the mines, enables me to say with confidence, that it can be profitably conducted, even on a modern scale, and with limited means, but that the profits would be much greater, in proportion, if conducted on an extensive scale, with a permanent outlay, adapted to an enlarged plan of operations.

Over 6,000 bushels of coal from these mines have been wagoned to the landing, a portion of which was shipped to St. Louis in flat-boats, and the remainder was sold at the landing to steamboats running on the Missouri River, at a profit over expenses of mining and transportation. If this can be done under these circumstances, it is safe to assert that the profits would be much larger if the mines were properly opened after a scientific plan of operations, and worked by experienced miners, and a rail-road and other facilities were provided for transporting the coal.

I examined with particular care the ground between the two coal mines and the Missouri River, and more favourable routes for rail-roads could hardly be desired;—either of them would be entirely feasible with a branch road, to connect the two mines, or for two independent roads; and it only remains for a competent rail-road engineer to determine the best plan to be adopted. I have taken measures to secure the right of way through the private lands on both routes, free of charge, and the charter provides for the remainder.

The ground at the landing is admirably adapted for that purpose, and with a moderate expense can be so arranged as to discharge the coal from the cars directly into the boats; and it will be permanent, and not subject to overflow, as it is a rocky bluff, entirely above high water mark. The coal can be conveyed to St. Louis in steamboats, in barges towed by steam, or in flat-boats floated by the current, as experience may prove to be the most economical; and eligible yards and landings can be obtained at St. Louis on reasonable terms.

The next question in importance, and the one on which the others depend, is the existence of a market which will warrant a large expenditure, and extensive arrangements for mining and transporting the coal. On this point I am prepared, from information derived from reliable sources, to give an affirmative answer. From the returns made to the comptroller of St. Louis, of the quantity of Missouri and Illinois coal weighed at the city scales, it appears that the consumption of those coals in St. Louis, in the year 1846, was about 1,700,000 bushels; and it is estimated that it will reach this year (1847) 2,000,000 bushels, or about 70,000 tons, exclusive of the Pittsburg and anthracite coals, which, not being all weighed, cannot be accurately estimated, but it is supposed to make the entire consumption nearly 100,000 tons, and the amount is annually increasing. Indeed, I was assured that all that is wanting to make St. Louis the largest manufacturing city of the west, is an abundant supply of cheap fuel, of good quality, as in every other respect they can now compete with Cincinnati and Pittsburg; and notwithstanding the disadvantages they labour under, in this respect, their foundries and manufactories are rapidly increasing in number every year.

I found the Cannel coal pretty extensively known in St. Louis, and highly approved wherever it had been tried, for foundry purposes, for raising steam, for making gas and for family use; and I was assured that if it was introduced in sufficient quantity, and sold at a reasonable and uniform price, it would almost entirely supersede the use of the

other coals, and great anxiety was manifested by foundrymen and others, to obtain it as early as possible.

But St. Louis would by no means be our sole dependence for a market, though I believe that our utmost efforts for some time to come, would not enable us to supply the demand from that city alone. Many of the steamboats on the Missouri river have tested the coal, and are anxious to obtain it; the boats running up and down the Mississippi from St. Louis would also supply themselves whenever they leave that port, and the gas companies of St. Louis, Louisville and New Orleans, would find it for their advantage to use it in preference to any other coal.

The numerous lines of ocean steam-ships which touch at New Orleans, afford still another large and increasing market for this fuel. They now use Pittsburg coal; but as these mines are about 600 miles nearer to New Orleans, the Cannel coal can be delivered there at less expense, and as it is so much superior for the purpose, it would undoubtedly be used in preference, if placed there in sufficient quantities.

The quality of the Missouri coal in the vicinity of St. Louis is very inferior, and cannot be used for smelting iron, owing to the quantity of sulphur, and other impurities it contains, and the Illinois coal is not much better. Owing to the inferior quality of these coals, they cannot be yarded or kept on hand in large quantities. They are brought to the city in wagons, a distance of from five to nine miles; and as the roads are almost impassible during the winter season, the supply is very irregular, and the prices fluctuating, and sometimes very high.

The Cannel coal has been tested in various ways, and found to be of a superior quality, as will be seen by reference to the annexed certificates and analyses. It is harder and more compact than the English Cannel coal, and is susceptible of a high polish. Its fracture is conchoidal; it is free from impurities, and never slacks or crumbles when handled or exposed to the weather, and it is not liable to spontaneous combustion when piled in large masses, or stowed in the hold of a ship, like the ordinary bituminous coals; it produces a large volume of bright flame, with an intense heat; it consumes almost entirely, leaving only light ashes, similar to those made by hickory wood; it makes no dust or waste in mining or transportation, and is as clean to the touch as granite or marble. Its cleanliness is a peculiarity which distinguishes it from all other coals, renders it very desirable for parlour use, and

in connection with its qualities for raising steam, and its not being liable to spontaneous combustion, adapts it admirably to ocean steam navigation.

I visited several places on these lands where iron ore of the best quality (red oxide) is found in large quantities. The beds have not yet been thoroughly explored, but there are indications of the existence of sufficient ore to warrant the erection of extensive works for the manufacture of iron.

The veins can be traced for miles along the sides of the hills, and in the ravines in the direction of the veins. All the materials required to manufacture iron to advantage are at hand, and St. Louis affords a market at all times, and at prices yielding large profits. This branch of the business of the Company should be put into operation as soon as the coal mines are successfully opened.

In conclusion, I have examined the title to the lands, and find it correct and free from incumbrances; I would therefore recommend its reception, and a compliance with the terms of the contract for the purchase of the lands; also the adoption of prompt measures for putting the business of the Company into early operation.

Very respectfully,

TRACY R. EDSON, *President.*

Cannel Coal Mines, Callaway County.

This is to certify, that I found, upon the opening called the Mastodon bed, a shaft sunk to the depth of 46 feet, of solid Cannel coal of the best quality, and not reaching through to the bottom of the vein. On taking the dip, from the inclination of the layers in the shaft, I found it to be one foot in three; I then sunk a shaft 85 feet to the north-east, and reached the coal at the exact depth required by that dip: thus determining the direction and dip of the vein. I also found, at the opening known as the Mammoth bed, a shaft sunk to the depth of $24\frac{1}{2}$ feet in solid Cannel coal, reaching through the vein where it crops out; and from excavations which I made to the southwest, reaching the coal, and as the associated rocks and minerals appear to be identical at the two openings, I am satisfied it is a regular formation, underlying the lands between the two points. I also visited three other openings of Cannel coal, and two of blacksmith's or bituminous coal, one of which is 7 feet thick, all lying on your lands, and within the basin between the two large openings.

I have been engaged in mining coal and iron ore for 27 years past, in Scotland and this country, and I never saw or heard of such extensive prospects of Cannel coal in any country. The last work I done in Scotland was on a vein of Cannel coal in Lennoxshire, of 22 inches in thickness.

The quality of the iron ore found on the lands and in the vicinity is excellent and can be obtained in large quantities; and there is abundance of limestone, sandstone and fire-clay contiguous to it, and water sufficient; and I am of opinion that iron can be manufactured here as cheaply as at any place I am acquainted with.

Yours, respectfully, &c.,

DAVID PERCEY,

Master Miner, of Frostburg, Md.

From the St. Louis Intelligencer.

RICHER THAN A CALIFORNIA "PLACER."

It always affords us pleasure to call attention to the inexhaustible mineral wealth of Missouri, which, after all, is hereafter to be the striking characteristic of the state. It is true that her soil is unsurpassed in fertility, and in agricultural wealth she will shortly compare favourably with the best states of the union. But it is in the extent, the variety and the richness of her mineral treasures, that Missouri excels by far, all the states of the union. Her iron is not only inexhaustible, but is found in such enormous masses as to render it one of the marvels of the world. Amongst the greatest natural curiosities of the earth, are the iron mountain and the Pilot Knob of Missouri.

But almost incredible as are these immense deposits of iron, that indispensable article is not confined to these localities, but is found in various portions of the state, and often in close proximity (as in Callaway county) to the richest agricultural regions. Then we have rich and almost exhaustless mines of lead, copper, cobalt, nickel and other rare and valuable metals; and, to "cap the climax of her wealth," she has coal mines of such marvelous extent and richness as almost to defy belief. Will our eastern friends credit us, when we assert that in Callaway County, almost upon the shore of the Missouri River, there is a stratum of the purest Cannel Coal, *seventy-five* feet thick, and covering an area of several miles in extent? Will it also be believed, that in immediate proximity to this exhaustless bed of fuel, there is found iron ore of the best quality and in the greatest quantities? These

are plain substantial matters of fact, of which no one can doubt who will read the following very interesting article from the *Fulton Telegraph*. Let it be born in mind, that these mineral treasures are found at a point very near the geographical centre of the state, immediately on the Missouri River, and just opposite the mouth of the Osage, one of the largest tributaries of the Missouri.

Let it also be remembered, that they are found in the midst of a rich agricultural region, where provisions of every kind are cheap and abundant, and which will afford an extensive market for the products of these mines. When these facts are considered, it is evident that Callaway County contains within its borders a "Placer" far richer than any to be found in California. We predict that the time is not far distant when Callaway will have more actual substantial wealth than almost any county in the state, except St. Louis. When these mines are developed, lands in the vicinity will immediately appreciate in value, labor will be in demand, and capital will be attracted thither rapidly in large sums. It affords us sincere pleasure to chronicle the progress of such enterprises. But we will not detain the reader longer from the article from the *Telegraph*.

From the Fulton (Mo.) Telegraph.

THE CALLAWAY MINING AND MANUFACTURING COMPANY.

In company with Col. J. F. Jones and C. H. Hardin, Esq., of this place, we spent Friday and Saturday in a visit to the villages of Côte Sans Dessein and New Bloomfield, and the coal and iron mines of the Callaway Mining and Manufacturing Company. The country was new to us, and we saw much to admire, and returned much gratified with the trip, which had given us an insight into the great natural resources of our country. The land is generally of great fertility, and we passed many well cultivated farms, on one of which we saw a patch of thrifty growing cotton. The crops are very promising.

We were, however, astonished at the extent and richness of the mineral resources of the country, and particularly of the lands belonging to the Callaway Mining and Manufacturing Company. This Company is composed principally of capitalists in Philadelphia and New York. It was chartered in 1847, and owns about 3000 acres of lands, lying mostly within five miles of the Missouri River at Côte Sans Dessein. They have recently completed an examination to

ascertain the thickness and extent of their Cannel coal beds, and the result has satisfied us that these coal fields are without a parallel, and may be mined for ages without being exhausted. Geologists, we believe, determine the quantity, by the dip and thickness of the veins, and the extent of country the coal seems to occupy, from the various out-croppings. If this is so, we are safe in saying that a region of country several miles square, embracing all the lands of this Company, is entirely underlaid with Cannel Coal. At the "Mammoth Bank" it crops out in a bluff of some 200 feet in length, through which a shaft has been sunk, and the vein has been found to be 24 feet in thickness. The coal also crops out at various points in different directions, within a mile and a half from the mammoth bank, and it appears in large quantities; but at the "Mastodon Bank," three and a half miles to the southwest, a shaft has been sunk, 11 feet square, to the depth of 88 feet, 75 of which is through a solid mass or stratum of Cannel coal, a thickness of vein without an equal in the world. Near the mouth of the shaft lay some 15,000 bushels of coal, mostly in large blocks.

The coal is of remarkable purity and free from any intermixture of lead, zinc or sulphur, and will, no doubt, supersede all other coals for foundries, for raising steam, for making gas, and for family use. Its properties for raising steam are pronounced to be superior to the English Cannel Coal, or indeed to any other whatever.

The Company are actively engaged in connecting these mines with the river at Côte Sans Dessein, by railroad, the route for which has been located, and is five miles in length. The agent, Mr. Isaac S. Clark, has a large number of English and Irish labourers at work, and about two and a half miles of the track has been cleared and graded, and a saw-mill, placed about midway from the mines to the landing, is preparing the timber for the superstructure. We rode along the entire track, and found the ground well adapted for a railroad, which, we should think, could be built at a comparatively small expense.

The village of Côte Sans Dessein stands upon ground several feet above the highest floods of the river, and has an excellent landing. There is a large forwarding and commission business transacted at this place, for the surrounding country and for the country bordering upon the Osage River, nearly opposite to the mouth of which it is situated. It is over 600 miles nearer to New Orleans than Pittsburgh, from whence that city is now mostly supplied with coal.

The Company have acquired, through their charter, about 22 acres at this point, for depots, agency, &c., which, together with their other lands extending to the river, embraces a large portion of Côte Sans Dessein Hill, which not only affords advantages for a landing place unequalled by any point on the river, but will furnish abundance of building materials for a large town, which will undoubtedly grow up there, as it contains extensive quarries of the buff-coloured sandstone, of which the State House at Jefferson City was built. From the evidence we saw, we are of opinion that iron ore, in great quantities, lies near their coal banks; and we have no doubt but the resources of the Company are quite as extensive in this as in the Cannel Coal. Within one hundred yards from the mammoth bank, iron ore of a rich quality appears on the surface. It is also found in immense quantities about $1\frac{1}{2}$ miles west of the Mastodon bed, where it lies on the surface in great blocks, and at other points in the vicinity, on the lands of the Company.

The object of the Company is the mining of coal, and the manufacture of iron; and surely they could not desire materials of a richer quality or in greater abundance, or a more flattering prospect of wealth, as the reward of the energy and enterprise required to develop these bountiful provisions of nature.

These mines are 12 miles from Jefferson City, 17 from Fulton, and 120 from St. Louis; and being, as it were, on the margin of our great river, there are the best facilities for reaching any market whatever.

With such materials and facilities, this Company would evidently neglect the great advantages they have secured, were they not to urge forward with despatch this great improvement.



I concur fully in all the facts and conclusions stated in the foregoing editorial, it having been my pleasure to visit the mineral lands of the Company, at the same time with the editor and Mr. J. F. Jones.

C. H. HARDIN.



State of Missouri, Callaway County, ss.—I, Josias Dixon, farmer, residing near the mines in Callaway County, Missouri, known as the Mastodon Coal Mines, belonging to the Callaway Mining and Manufacturing Company, have examined said mines, and found the principal shaft sunk to the depth of about eighty-eight feet. I also found drifts extending north and south, the direction in which I suppose the

vein to run. The stratum of coal in said shaft is about 75 feet thick. I further state, that I have seen the same pure Cannel Coal, which is found in said shaft, cropping out at different places, several miles apart, around said mines, upon the lands belonging to said Company. I also know of several different veins of Iron Ore in the vicinity of said coal mines, also on the lands of the Company, but what the thickness or extent of the iron ore is, I am not able to say, but I believe the iron as well as the coal is very extensive, if not inexhaustable.

JOSIAS DIXON.

Subscribed and sworn to, before me, }
this 24th day of June, 1851. }

JAMES D. MCGARY.

Justice of the Peace in Callaway County.



State of Missouri, Callaway County, ss.—We, James Jefcot, John E. Crawford and John Mills, miners, having been engaged in the mining business in England, were employed by the Callaway Mining and Manufacturing Company, in sinking a shaft at their coal mines in Callaway County, Missouri, known as the Mastodon Coal Mines. Said shaft was eleven feet square, and eighty-eight feet in depth. We found pure Cannel Coal, in said shaft, seventy-five feet thick; and drifts were run north and south, and east and west about thirty feet. We believe the said coal to be of the best quality and inexhaustable. This coal bank is about five miles from the Missouri River, at Côte Sans Dessein, to which place said Company is now building a railroad.

JAMES JEFROT,

JOHN E. CRAWFORD,

JOHN MILLS.

Sworn and subscribed to, before me, }
this 24th day of June, 1851. }

JAMES D. MCGARY,

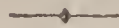
Justice of the Peace in Callaway County.

Callaway County, June 17, 1851.

This is to certify, that I have examined the coal bank in Callaway County, belonging to the Callaway Mining and Manufacturing Company, and found a shaft sunk eighty-eight feet deep, seventy-five of which is through a vein of pure Cannel coal. They had tunneled eighteen feet south from the main shaft, and I saw no difference in the coal, which appears to be inexhaustible. This was in the fore part of May last.

Given under my hand, the day above written.

JAMES L. WHITTINGTON.



This is to certify, that I was called on by Mr. Clark, in company with Mr. Whittington, to examine the coal bank belonging to the Callaway Mining and Manufacturing Company, and found the veins of coal to be seventy-five feet thick, as said Whittington has stated.

Given under my hand, this 17th day of June, 1850.

JOHN S. LANGLEY.

Sworn and subscribed to, before me, }
this 17th day of June, 1850. }

JAMES L. WHITTINGTON, *J. P.*

Callaway County, Missouri.

ANNUAL REPORT

OF THE

BOARD OF DIRECTORS FOR 1854,

TO THE STOCKHOLDERS.

The Board of Directors Report:—They commenced their operations in May, by appointing a Superintendant and Engineer, who after fully examining the topography of the Company's lands, reported the improvements made by the former board of no practical value, as they all tended to the outcrops over rugged land, instead of coming at the base of the hills, and working by drift from the Creek Valley, up which the rail road could be constructed at a small cost, in consequence of its natural adaptation, being nearly level for a distance of six out of the seven miles to be run; And in the process of mining, saving largely by working by drift, and allowing all the drainage to run into the creek, superseding the necessity of any machinery, or expense for pumping or hoisting out the coal. The new line of road being laid out, proposals were made for grading, bridging, crossties, laying the superstructure, &c., by responsible contractors, furnishing everything except the iron, and completing the road ready for use for \$18,000, or about \$2,500 per mile. This contract was concluded on the 26th of May, with the understanding the whole line should be completed in six months, unavoidable circumstances excepted. In July a spirited commencement was made, but little progress before the cholera cut short their operations; in three days some 23 of their number died, the rest became so alarmed the work was suspended until October, since which they have been progressing; as the low stage of the water in the Ohio river until after November, precluded the shipment of the rails before Spring, it was concluded the force upon the work need be only sufficient to complete it by April or May.

By the Engineer's report of the 12th January, they have about four miles of the road graded, the crossties for the road, and the timber for two of the bridges, and about one third enough for the

remaining bridge, on the ground, framed and ready to put up, also the trussle work for the 400 feet to be constructed; and the contractor agrees to complete all, with the track ready for use, in 40 days from the arrival of the iron rails. The contract for the Rail was made at Wheeling, for a T Rail of 50 lbs. to the yard on terms considered favourable. Three Barges have been built, each capable of carrying 300 tons, upon which it is designed to transport the rail to the Company's landing. All the requisite materials are in readiness, and with the opening of spring navigation will be forwarded, and the whole route of road will be completed, it is believed, by the first of May.

The present condition of the Company is as follows:

Paid for lands, at organization, 5000 shares of	
Stock, par. - : - - - - -	\$250,000 00
Paid for lands, subsequent, part cash & stock, at stock val.	142,000 00
Cost of improvements to the present time, - -	105,895 23
On hand, cash, car wheels, axles, &c., as per inventory,	15,363 48
	<hr/>
	\$513,258 71
Present indebtedness, - - - - -	13,258 71
	<hr/>
Amount of stock issued 10,000 shares - -	\$500,000 00
The company have on hand for improvement fund, 5000	
shares, - - - - -	250,000 00
	<hr/>
Total amount of capital, - - - - -	\$750,000 00

Of the above lands about 300 acres are on the Missouri River, at Cote Sans Dessein, suitable and desirable as town lots.

Late in the fall it was found necessary to have additional legislation, and an application has been made to the Legislature for such amendments to our charter as experience has shown to be required; the company's agent writes: "no objection is made to the bill"

Examinations have been made with the view of determining the most suitable point to terminate our improvements. These examinations have developed deposits of coal heretofore unknown, and in apparent great magnitude, as the following report by the Engineer shows: "In a ravine in N. W. of Sec. 24, there are three openings about seven hundred feet apart; in the first the coal is over 32 feet thick, with a slate covering 8 feet thick, and dips, as do all of them, towards the hill, at about one foot in seven. In the upper opening three bores have been made into coal 45 feet thick, with a covering

of sand stone and slate 28 feet thick." And the various outcrops along the ridges, for several miles N. E. and S. W. in regular range, indicates an extraordinary amount of coal. From calculations, an amount of over 300,000 tons of coal is bored into, and known to exist in a space of less than ten acres, or equal to about one hundred millions of tons in the company's lands.

The ability of the company to supply the coal cannot equal the demand for years. From its pure quality, its free burning, entire freedom from sulphur, its hardness, and absence of any qualities which produce spontaneous combustion, renders it the most valuable article for family, steam or gas purposes, and upon its introduction will supercede all other coals with which it will come into competition. The high estimation in which it is held, appear from the accounts given the committee and agents while in St. Louis, as also from the following extract from the history of St. Louis for 1853. "St. Louis must become the great manufacturing point. Here the Iron Ore will be met by the Cannel Coal from the Osage. Experiments have shown that this coal can be substituted for charcoal without impairing the quality of the iron, and experienced Iron Masters are sanguine of making rails by the use of Cannel Coal direct from the ore, and of a quality for toughness and durability superior to any now in use." The information received by the committee was, that our coal is held in the highest estimation for all purposes, and it would immediately supercede all others if a supply could be had; that advantageous contracts could be made with responsible parties for all the coal we can get out. That a half million of tons could not supply St. Louis, and the consumption by steamboats would increase with the production. So that any amount of coal which this company may be able to get to market will meet with a ready sale, at a profit which cannot but exceed the expectations of the most sanguine friends of the enterprise. All that is wanted is a spirit of mutual confidence to put us forward. It is high time we should contribute our share of combustible material from our splendid coal fields, to drive the forge, plough the waters, and cheer the domestic hearth. Too much attention has been bestowed upon preliminaries; too little to the actual substance. The following made from careful data affords some idea of the value of our coal, and what this company may be in the course of a few years.

Cost of mining, transporting to St. Louis including all expenses at St. Louis on 50,000 tons per annum, \$1 15 per ton.

The price of Pittsburg Coal in St. Louis ranges from 18 to 30 cts. per bushel, and the Illinois Sulphurous Coal from 10 to 15 cts. per bushel.

The Callaway Cannel Coal would be preferred to either, and can be safely placed at 18 cts. per bushel, or \$5 per ton.

A production of 50,000 tons per annum will yield a profit of 25 per cent. on the Capital Stock of the Company. In addition to the Cannel Coal, the company have large depositos of Iron Ore of rich quality; also Bituminous Coal which Cokes readily; making it equal in value to Pittsburg Coal.

The amount required to put all into active operation, very trifling exceeds the amount that may be produced in six months, and is small when compared with the outlays of companies generally; one hundred thousand dollars will undoubtedly put all into action, and only about one half will be required in six months, the balance in nine and twelve months.

Cost of completing the road as per contracts, -	-	\$64,897 00
Equipments for transportation, mining, &c., -	-	26,000 00
Incidental, -	- - - - -	3,000 00
		<hr/>
		\$93,897 00

The most practicable mode of raising the required amount, will be by bonds secured by mortgage on the lands and effects of the company, and redeemable in five years, bearing an interest of ten per cent. It is believed that dividends on the stock held by the company, will be sufficient to pay off the mortgage at maturity. The ultimate success cannot be doubted. The sale of town lots at the landing, will no doubt yield a sum equal to the cost of all our improvements. As to the practical value of our coal, or other lands, the natural effect of our operations will be to add largely to both, and appreciating the importance of our operations, either in a pecuniary point of view or otherwise, and with a feeling in the future of no less concern than perfect confidence; all that is wanted is the determination to make available that which we possess, and which can be readily done by a unity of action, and a determination of each to do his part.

BY ORDER OF THE BOARD, FEB. 5th, 1855.

Plans and Diagrams may be seen at the Companys Office, No. 1 Forrest Place, (back of 55 South Fourth Street, Philadelphia.)



